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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/035,165 | 01/04/2002 | Naoki Yazawa | Q67946 | 1762 |

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| EXAMINER |
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HARPER, HOLLY R

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| ART UNIT | PAPER NUMBER |
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2879

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,165

Applicant(s)

YAZAWA, NAOKI

Examiner

Holly R. Harper

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Shioya et al. (USPN 6,091,382).

In regard to claim 1, the Shioya reference discloses an organic EL display (Column 5, Lines 62-63) with a transparent substrate (Figure 29, Element 12), a transparent electrode (Figure 29, Element 13), an EL layer (Figure 29, Element 16), a back electrode (Figure 29, Element 17), and a half mirror disposed on the outside of the substrate (Figure 29, Element 293).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2879

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al. (USPN 6,091,382).

In regard to claim 4, the Shioya reference discloses that the thickness of the substrate is between .1 and .2 mm (Column 14, Lines 20-22). Shioya does specify the dot pitch but it is known in organic EL displays that the dot pitch is between 15 to 40 microns. Therefore, the Shioya reference discloses a thickness of the substrate that makes the perpendicular distance between the organic EL layer and the half mirror to be greater than the dot pitch of the display.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senoo et al. (USPN 6,517,957) in view of Kawai (USPN 4,50,128).

In regard to claim 1, the Senoo reference discloses an organic EL display with a transparent substrate (Figure 3, Element 1), a transparent electrode (Figure 3, Element 2), an organic EL layer (Figure 3, Element 3), and a back electrode (Figure 3, Element 4). The Senoo reference does not disclose a half mirror. The Kawai reference teaches that a half mirror is placed on the back of a substrate, on the opposite side from the viewer (Figure 2, Element 11). The mirror is placed behind the transparent substrate to enhance light transmission and achieve a bright display. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate a half mirror on the back of the transparent substrate, as taught by Kawai, to enhance light transmission.

In regard to claim 2, the Kawai reference discloses that the mirror layer is made of metal (Column 4, Lines 12-15) and by being placed on the outer surface of the substrate (Figure 2, Element 11) will protect the display.

In regard to claim 3, the Senoo reference discloses that a binding resin is used to attach each layer on the substrate (Column 65, Line 65 – Column 66, Line 5). Therefore, a resin would be used to attach the mirror layer, taught by Kawai, to the substrate.

In regard to claims 4-6, the Senoo in view of Kawai reference does not specify the thickness of the substrate or the dot pitch. However, it is known that the dot pitch in organic EL displays is between 15 to 40 microns and that a glass substrate is normally 1mm thick. Therefore, the Senoo in view of Kawai reference has a thickness of the substrate that makes the perpendicular distance between the organic EL layer and the half mirror to be greater than the dot pitch of the display.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Response to Arguments

7. Applicant's arguments filed 6/17/04 have been fully considered but they are not persuasive.

Regarding applicants argument that Shioya does not disclose an organic layer on a transparent electrode, the examiner respectfully disagrees. The phrase "disposed on" does not preclude an additional layer between the organic and electrode layers. The reference does disclose a layer in between the organic layer and the electrode, but the applicant's claim states an EL display "comprising". Therefore, the limitations of the claim are met, even if there are additional elements in the structure.

Regarding applicants argument that Kawai does not disclose a mirror with a similar function, the examiner respectfully disagrees. The Kawai reference does disclose a half mirror, and therefore meets all of the structural limitations of the claim. In response to applicant's argument that the references fail to disclose certain features of applicant's invention, it is noted that the functional limitations upon which applicant relies are not recited in the rejected claim(s). Furthermore, anything drawn to the function of the device is not given patentable weight unless it structurally distinguishes itself over the prior art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (571) 272-2453. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

Art Unit: 2879

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879

